

A VEGETATIVE KEY TO THE NATIVE AND COMMONLY CULTIVATED PALMS IN FLORIDA

HUGH NELSON MOZINGO
Florida Southern College

Palms, large and small, graceful and grotesque, characterize more than any other plant family the native and cultivated vegetation of Florida. About 14 species are native to Florida, the uncertainty being due to doubt about the taxonomic validity of certain forms.

While this is a relatively small number, two species, *Serenoa repens* and *Sabal palmetto*, are so ubiquitous that it is difficult to be very far out of sight of either one. An attempt has been made to introduce into Florida a large segment, possibly as much as 25%, of the approximately 4,000 species of palms in existence.

Although many such efforts have not met with success, it is probable that at least 500 different species and varieties exist in Florida at the present time. However, despite their abundance, there appears to be no available vegetative key to our common native and introduced forms.

It was with this deficiency in mind that the following key was constructed. Eighty species are treated, including all of the valid native species recognized by Small, the commonly cultivated species, and some of the rarer forms. It is hoped that the following key, inadequate as it may prove to be, will encourage a more complete survey of this group as it occurs here. Native species are designated by an asterisk (*); the dubious native species by a double asterisk (**).

1a. Palmate leaved species	2
1b. Pinnate leaved species	34
2a. Stems very slender, not much over 2.5 cm. in diameter ...	3
2b. Stems stouter	4
3a. Leaves with 5 to 10 or more segments, central ones 5 to 7 cm. broad	<i>Rhapis excelsa</i>
3b. Leaves with 7 or 8 segments, usually not more than 3 cm. broad	<i>Rhapis humilis</i>
4a. Trunk none or creeping	5

4b. Trunk evident, usually tall	8
5a. Stem with numerous long, sharp, black spines — <i>Rhapidophyllum hystrix</i> *	
5b. Stem without spines	6
6a. Petioles with spines along the margins	<i>Serenoa repens</i> *
6b. Petioles without spines	7
7a. Midrib none	<i>Sabal minor</i> *
7b. Midrib extending nearly through the blade ...	<i>Sabal etonia</i> *
8a. Spines present on petioles	9
8b. Spines absent on petioles	21
9a. Leaves 60 cm. wide, or less	10
9b. Leaves over 60 cm. wide	12
10a. Petioles armed with large, sharp spines; leaves not cor- date at the base	11
10b. Petioles armed with numerous small, sharp spines; leaves cordate at the base	<i>Serenoa repens</i> (erect form)*
11a. Leaves rigid, rarely over 60 cm. wide; trunk rarely over 1 m. high; spines black	<i>Chamaerops humilis</i>
11b. Leaves somewhat lax, 60 to 90 cm. wide; trunk up to 12 m. high (petioles with flat, orange, upcurved spines) — <i>Paurotis wrightii</i> *	
12a. Most leaves between 60 and 90 cm. wide — <i>Paurotis wrightii</i> *	
12b. Leaves well over 90 cm. wide	13
13a. Leaves over 1.8 m. wide	<i>Corypha utan</i>
13b. Leaves under 1.8 m. wide	14
14a. Petioles lightly or heavily tomentose; stocky palms with large rigid leaves	15
14b. Not as above	17
15a. Leaves very glaucous	<i>Latania loddigesii</i> (juvenile form)
15b. Leaves not glaucous	16
16a. Leaves light green; petiole heavily tomentose, margins orange	<i>Latania verschaffeltii</i> (juvenile form)
16b. Leaves darker green; petiole lightly tomentose, margins red	<i>Latania borbonica</i> (juvenile form)
17a. Leaves somewhat recurved	18
17b. Leaves not recurved	20
18a. Petioles spiny throughout their length ..	<i>Livistona australis</i>
18b. Only the lower portion of the petioles spiny	19

- 19a. Lower half of the petiole with hard, brown spines, up to 15 mm. long *Livistona chinensis*
- 19b. Lower half of the petiole with larger, crooked, shiny brown spines *Livistona rotundifolia*
- 20a. Leaf segments margined with very numerous stiff fibers; leaves gray-green (not glaucous); petioles usually armed to the middle or somewhat beyond with stout, hooked spines; trunk very stout, not usually expanded at the base
—*Washingtonia filifera*
- 20b. Leaf segments with few fibers, except when young; leaves bright green; petioles usually with spines mostly throughout their length; trunk not as stout, expanded at the base
—*Washingtonia robusta*
- 21a. Leaves rigid, or only slightly drooping 22
- 21b. Leaves not rigid, leaf tips very obviously drooping (see also 28) 30
- 22a. Leaves very glaucous on both surfaces ... *Latania loddigesii*
- 22b. Leaves not glaucous at maturity on both surfaces 23
- 23a. Leaf base cuneate 24
- 23b. Leaf base not cuneate 25
- 24a. Leaf segments about 90 *Pritchardia pacifica*
- 24b. Leaf segments about 50 to 60 *Pritchardia thurstonii*
- 25a. Slender tree covered with coarse, matted root-like fibers *Coccothrinax miraguama*
- 25b. Not as above 26
- 26a. Petioles tomentose 27
- 26b. Petioles not tomentose 28
- 27a. Leaves light green at maturity, when young, reddish or purplish; petioles heavily tomentose, margins orange
—*Latania verschaffeltii*
- 27b. Leaves darker green at maturity, when young, distinctly yellowish; petioles lightly tomentose, margins red
—*Latania borbonica*
- 28a. Dwarf, maximum height of 2 m.; slender petioles; leaves bright green *Thrinax morrisii*
- 28b. Taller; not as above 29
- 29a. Stout tree; long pliable petioles; leaves light green above *Thrinax microcarpa**

- 29b. Slender tree; petioles shorter and stiff; leaves yellow green above *Thrinax parviflora*^c
- 30a. Trunk very slender, under 15 cm.; leaves silvery beneath *Coccothrinax argentata*^c
- 30b. Not as above 31
- 31a. Trunk slender, with a covering of coarse, black fibers; leaves up to 1.2 m. wide *Trachycarpus fortunei*
- 31b. Trunk not as above; leaves frequently larger 32
- 32a. Ligule less than 12 cm. long; trunk moderately stout; leaves green *Sabal palmetto*^c
- 32b. Not as above 33
- 33a. Trunk massive; ligule usually not over 15 cm. long; leaves not glaucous, segments about 60, with abundant fibers
—*Sabal causiarum*
- 33b. Trunk not so massive, frequently thickened in the middle; ligule 15 cm. long or longer; leaves glaucous, segments about 80, with fewer fibers *Sabal umbraculifera*
- 34a. Trunk spiny 35
- 34b. Trunk not spiny 40
- 35a. Leaf segments broad, wedge-shaped, apex truncate and ragged *Aiphanes caryotaefolia*
- 35b. Leaf segments not as above 36
- 36a. Trunk very slender, to 4 cm. wide 37
- 36b. Trunk considerably stouter 38
- 37a. Trunk 2.5 to 4 cm. in diameter; leaves dull green
—*Bactris major*
- 37b. Trunk to 2 cm. in diameter; leaves gray-green .. *Bactris minor*
- 38a. Spines on the petiole bases, trunk smooth after those have fallen *Acrocomia hospes*
- 38b. Spines on the trunk 39
- 39a. Trunk fusiform; leaves bluish to gray beneath
—*Acrocomia armentalis*
- 39b. Trunk cylindrical; leaves green beneath *Acrocomia totai*
- 40a. Trunk smooth, or relatively so 41
- 40b. Trunk not smooth, frequently with leaf bases remaining attached 66
- 41a. Leaf segments cuneate or delta-shaped 42
- 41b. Leaf segments not as above 43
- 42a. Leaves 1.2 to 2.7 m. long; producing suckers; stem with a maximum diameter of 13 cm. *Caryota mitis*

- 42b. Leaves 5.5 to 6 m. long; not producing suckers; stem much larger in diameter *Caryota urens*
- 43a. Sheathing petiole bases forming a prominent green column atop the trunk 44
- 43b. Sheathing petiole bases not forming a prominent green column atop the trunk 55
- 44a. Trunk slender, less than 13 cm. wide, with a characteristic swelling at the base; leaf segments erose at the apex
—*Ptychosperma elegans*
- 44b. Not as above 45
- 45a. Trunk disproportionately stout for its height; leaves 1 to 2 m. in length 46
- 45b. Not as above 47
- 46a. Trunk sometimes bulged below leaf cluster; leaf segments about 60 cm. long, 2.5 to 4 cm. wide, lateral veins not prominent *Mascarena verschaffeltii*
- 46b. Trunk bulged near base, frequently constricted at the top; leaf segments 30 to 40 cm. long, 5 cm. wide or wider, with prominent lateral veins *Mascarena lagenicaulis*
- 47a. Trunk characteristically slightly bulged near the middle or upper part 48
- 47b. Trunk not as above 50
- 48a. Leaf segments with prominent lateral veins; maximum height of 12 to 18 m. *Roystonea regia*
- 48b. Leaf segments not prominently ribbed or veined 49
- 49a. Maximum height of 27 to 30 m.; trunk light gray
—*Roystonea elata**
- 49b. Maximum height of 9 to 14 m.; trunk darker, more prominently bulged near the middle *Roystonea borinquena*
- 50a. Trees with slender trunks, bulged at the base; leaf segments 5 to 7.5 cm. wide 51
- 50b. Trees or leaf segments not as above 52
- 51a. Leaf segments with long tapering points and prominent lateral veins *Dictyosperma album*
- 51b. Leaf segments short-pointed and with indistinct lateral veins; young leaves with orange-colored veins
—*Dictyosperma aureum*
- 52a. Short, maximum height about 6 m.; trunk stout, tapering; leaves glaucous with very prominent lateral veins
—*Adonidia merrillii*

- 52b. Taller; cylindrical trunk slender or stout 53
- 53a. Trunk slender; leaf segments ashy-glaucous beneath, secondary nerves quite prominent — *Archontophoenix alexandrae*
- 53b. Not as above 54
- 54a. Longer leaf segments to 45 cm., green beneath; slender trunk more prominently ridged by leaf scars than the following *Archontophoenix cunninghamiana*
- 54b. Leaf segments in one plane, longest about 1 m.; trunk stouter, less prominently ridged by leaf scars than the above, perfectly cylindrical *Roystonea oleracea*
- 55a. Leaf segments obliquely cut and erose-dentate at the apex; stems suckering freely *Actinophloeus macarthuri*
- 55b. Leaf segments not obliquely cut at the apex 56
- 56a. Leaf segments relatively few (14 to 24); stems very slender, to 4 cm. thick *Chamaedorea elegans*
- 56b. Leaf segments more in number; stems over 6 cm. thick ... 57
- 57a. Trunk relatively slender, not much over 6 cm. thick 58
- 57b. Trunk not slender 62
- 58a. Trunks usually in clumps; leaves gracefully arched, yellow green; trunk 10 to 15 cm. in diameter
—*Chrysalidocarpus lutescens*
- 58b. Not as above 59
- 59a. Petiole length not over 1/5 of blade length 60
- 59b. Petiole length considerably over 1/5 of blade length ... 61
- 60a. Leaves short petioled (1/7 of the leaf), resembling *Roystonea* species; mature trunk with swollen base
—*Gaussia attenuata*
- 60b. Leaves longer petioled (1/5 of the leaf), somewhat arched, deep green; trunk not swollen at the base .. *Heterospathe elata*
- 61a. Leaves about 3 m. long; very long petioles; leaf segments quite definitely drooping *Howea forsteriana*
- 61b. Leaves 2 m. long or less; petioles considerably shorter than above; leaf segments not as prominently drooping
—*Howea belmoreana*
- 62a. Leaves quite erect, dark green; tall tree to 18 m.
—*Orbignya cohune*
- 62b. Leaves not erect 63
- 63a. Trunk swollen in part 64
- 63b. Trunk not ordinarily swollen 65

- 64a. Trunk swollen at base; leaves to 5.5 m. long, yellow green *Cocos nucifera***
- 64b. Trunk swollen near middle; leaves to 2 m. long, dark green *Pseudophoenix sargentii***
- 65a. Leaf outline long lanceolate, segments in groups of 2 to 4 along rachis *Arecastrum romanzoffianum*
- 65b. Leaf outline somewhat orbicular, segments not in groups along rachis *Hedyscepe canterburyana*
- 66a. Leaves decidedly glaucous 67
- 66b. Leaves not prominently glaucous, or if so, leaves not strongly recurved 69
- 67a. Tip of leaf segments cut into two narrow divergent lobes at least 2.5 cm. long *Butia eriospatha*
- 67b. Tip of leaf segments not usually cut deeper than 2 cm., lobes not divergent 68
- 68a. Leaves to 3 m. long; middle leaf segments about 2.5 cm. wide; trunk to 7.5 m. tall *Butia yatay*
- 68b. Leaves to 2 m. long; middle leaf segments narrower; trunk shorter *Butia capitata*
- 69a. Leaflets conspicuously drooping; petioles with 2.5 to 4 cm. spines; long stick-like petiole bases clothing stem
—*Arikuryroba schizophylla*
- 69b. Not as above 70
- 70a. Leaves white-glaucous below; leaf segments erose-dentate *Wallichia caryotoides*
- 70b. Not as above 71
- 71a. Petioles spiny serrate *Elaeis guineensis*
- 71b. Petioles, if spiny, with the lower leaf segments modified into spines 72
- 72a. Trunk small and bulb-shaped, not elongated 73
- 72b. Trunk not bulb-shaped 74
- 73a. Leaf segments very rigid; fascicles tending to be opposite *Phoenix acaulis*
- 73b. Leaf segments soft; fascicles irregularly arranged
—*Phoenix humilis*
- 74a. Base of petiole very abruptly and widely flaring
—*Jubaea spectabilis*
- 74b. Base of petiole becoming wider, but not very abruptly flared 75

- 75a. Young stem prominently covered with long, black coarse fibers *Arenga saccharifera*
- 75b. Stem not so covered 76
- 76a. Leaf segments soft 77
- 76b. Leaf segments rigid 79
- 77a. Small palm; short, slender trunk 78
- 77b. Much larger, to 6 m. tall; leaves shiny, yellow green; leaf segments tending to be in one plane *Phoenix rupicola*
- 78a. Leaf segments decidedly drooping; trunk clothed with old clasping, persistent petiole bases *Syagrus Weddelliana*
- 78b. Leaf segments not as prominently drooping; trunk with knob-like stumps of petiole bases *Phoenix loureirii*
- 79a. Trunk short (to 1.2 m.) and stout; leaves 1.2 to 1.5 m. long *Phoenix pusilla*
- 79b. Trunk and leaves not as above 80
- 80a. Leaf segments 17 to 25 cm. long, bright green; slender trunk, small to 6 m. *Phoenix zeylanica*
- 80b. Not as above 81
- 81a. Leaf segments sword-shaped, whitish or mealy beneath; trunk 8 to 10 cm. in diameter, 2.5 to 8 m. tall
 —*Phoenix paludosa*
- 81b. Not as above 82
- 82a. Trunk slender, usually leaning, with many suckers at the base *Phoenix reclinata*
- 82b. Trunk stouter, not usually with many suckers at the base .. 83
- 83a. Leaves slender, gracefully arching; trunk massive
 —*Phoenix canariensis*
- 83b. Leaves stouter and shorter; trunk not so massive 84
- 84a. Leaves glaucous *Phoenix dactylifera*
- 84b. Leaves not glaucous *Phoenix sylvestris*

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